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(54) Title: SUPERCRITICAL FLUIDS IN THE FORMATION AND MODIFICATION OF NANOSTRUCTURES AND
NANOCOMPOSITES

(57) Abstract: Embodiments of nanostructures and nanocomposites and embodiments of methods for forming and modifying these
nanostructures and nanocomposites are disclosed. The methods can include transporting a metal, metallic compound or precursor
to a surface of a nanostructure substrate in a carrier while the carrier is in supercritical fluid form. Embodiments of the disclosed
methods can be used to form catalytic structures, such as catalytic structures including nanostructure supports and catalytic metallic
nanoparticles attached to the nanostructure supports. These catalytic structures are useful for catalyzing reactions in fuel cell ap-
plications, such as oxygen reduction and methanol oxidation reactions. Some of the disclosed nanostructures and nanocomposites
include carbon nanotubes.

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